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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,340

11/25/2003

Sung-Ha Kim

1793.1036

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21171

7590

01/12/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

MACK, RICKY LEVERN

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,340	KIM ET AL.	
	Examiner	Art Unit	
	Ricky L Mack	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-31 is/are allowed.
- 6) ☒ Claim(s) 1,5,7,8,10 and 17 is/are rejected.
- 7) ☒ Claim(s) 2-4,6,9 and 11-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0504</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 7, 8, 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Lambert (WO 00/60397).

Lambert discloses (see figure 1), as in claims 1, a color lighting system, comprising: a light source (*see near ref. 16*) to emit light; a color beam separator (*dichroic cube*) separating incident light emitted from the light source according to predetermined wavelength bands and transmitting the separated beams at different angles (*the red, blue and green light exits the dichroic cube at different angles*); a first condensing lens (12) condensing the separated beams; and a scrolling unit (10) changing travel paths of the condensed beams in color bars at different locations, and scrolling the changing of the travel paths of the condensed beams so as to periodically scroll the color bars.

Lambert discloses (see figure 1), as in claims 5, wherein the first condensing lens is a cylindrical lens (12) for selectively condensing light incident on the first condensing lens, only along particular incidence paths.

Lambert discloses (see figure 1), as in claims 7, wherein the scrolling unit comprises: a first cylindrical array lens (14), including a plurality of adjacently disposed cylindrical lenses converging and diverging light, incident on the first cylindrical array lens, independently; and implicitly discloses a first driving unit providing a driving force to scroll light exiting the first

cylindrical array lens and reciprocatingly-drive the first cylindrical array lens in a direction perpendicular to an optical axis of the incident light.

Lambert discloses (see figure 1), as in claim 8, wherein the scrolling unit further comprises: a second cylindrical array lens (15), separated from the first cylindrical array lens, including a plurality of adjacently disposed cylindrical lenses converging or diverging light, incident on the second cylindrical array lens, independently; and implicitly discloses a second driving unit providing a driving force to reciprocatingly-drive the second cylindrical array lens in a direction perpendicular to the optical axis of the light incident on the second cylindrical lens.

Lambert discloses (see figure 9), as in claim 10, wherein the scrolling unit comprises: a turning cylinder array lens (45), rotatably disposed along an optical path of light, incident on the scrolling unit, including a plurality of adjacently disposed cylindrical lenses, along an outer circumference portion of the turning cylinder array lens, having a cylinder shape; and a driving unit rotatably driving the turning cylinder array lens (page 15).

Lambert discloses (see figure 9), as in claim 17, wherein the predetermined wavelength bands consist of three separate predetermined wavelength bands for three separate colors (*see fig. 1 where light is separated into band of blue, green and red light*).

Reasons for Allowability

3. Claims 18-31 are allowed.
4. Claims 2-4, 6, 9, 11-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an examiner's statement of reasons for allowance: The following is an examiner's statement of reasons for allowability: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claim(s), in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in claim(s) 2-4, 6, 9, 11-16 and 18-31, wherein the claimed invention comprises a light source, a color beam separator separating light from the light source according to wavelength bands and transmitting the separated beams at different angles, a first condensing lens condensing the separated beams, a scrolling unit changing the travel paths of the condensed beams in color bars and periodically scrolling the color bars, and further having a uniform light forming unit transforming the light exiting the scrolling unit into uniform light as claimed. The prior art also does not disclose the diffractive surface limitations of claims 6, 9 and 11, or the inclination of the first, second and third dichroic mirrors of claim 2. The combination of all the claimed features are not anticipated or made obvious by the prior art and all of said features are relied upon for a determination of allowability.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

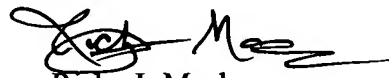
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for being related patent documents and/or disclosing a particular color separating and condensing feature: Kim et al. (6811263, 6824270,

20040233342, 20040263793), Nishida et al. (20020027642, 20020048000), Ouchi (20030072084, 20040246590) and Cho et al. (20040057018, 20040246445, 20040257387) .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky L Mack whose telephone number is (571) 272-2333. The examiner can normally be reached on Monday-Friday (6:30 AM to 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ricky L Mack
Primary Examiner
Art Unit 2873

RM
January 10, 2005